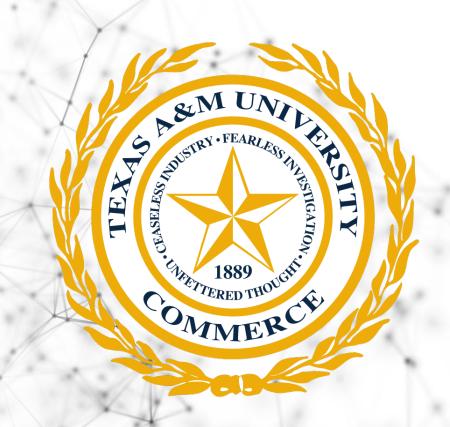# CSCI 595

Comparison of SVM and Random Forests for Heart Disease Risk Prediction

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INTRODUCTION

➢ Cardiovascular diseases pose a significant global health challenge, with their prevalence escalating due to shifting lifestyle patterns and societal influences.

➢ Limited access to medical resources in certain regions emphasizes the urgency for timely detection and continuous monitoring of heart diseases.

➢ Our research focuses on leveraging machine learning algorithms, specifically Support Vector Machines (SVM) and Random Forests (RF), to address the predictive challenges associated with heart disease risk assessment.

➢ The question guiding our study is: "How do SVM and RF algorithms differ in accuracy, efficiency, and interpretability when predicting the risk of heart disease?"

➢ We hypothesize that through a comparative analysis of SVM and RFs algorithms using real-world patient heart health data, we can analyze their respective strengths and limitations, thereby facilitating informed decision-making in cardiovascular health monitoring.